

November Open Ended Questions
Math for Standards
Optimizing Perimeter and Area

Name _____
Date _____

You have just been hired to build fences for Matt Mitarnowski and Fuzzy Jeff. Use the situation descriptions to find a solution for each problem. Give an explanation as to how you arrived at your answer.

1. Matt Mitarnowski wants a rectangular fence that is 24 meters long in total. Using only whole numbers for the dimensions of the length and width of the fence, determine what the dimensions of the rectangle would be so that the fence encloses the maximum area. You will need to use what you learned about perimeter and area to figure this one out. (6 points)

2. Fuzzy Jeff has different needs than Matt. Jeff wants a rectangular fence with an area of 30 m^2 , but has the smallest perimeter possible. Again, the dimensions of the length and width will be whole numbers. What dimensions will use the minimum amount of fencing? What is the minimum perimeter? You will need to use what you learned about perimeter and area to figure this one out, as well. (6 points)